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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/751,669	12/29/2000	David D. Koester	S01.12-0697	8902

7590

07/12/2002

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EXAMINER

CHEN, TIANJIE

ART UNIT

PAPER NUMBER

2652

DATE MAILED: 07/12/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/751,669

Applicant(s)

KOESTER ET AL.

Examiner

Tianjie Chen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 April 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 1-12 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-19 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-19 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Non-Final Rejection

Election/Restrictions

1. Applicant's election without traverse of Group II claims 13-19 in Paper No. 5 filed on 04/30/2002 is acknowledged.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 13-16, and 18 are rejected under 35 U. S. C. 102 (b) being anticipated by Frees et al (US 5,905,608).

With regard to claim 13-16 and 18, Frees et al shows a disc drive in Fig. 2 having an actuator 76 (Column 4, line 10).

Claims 13-16 and 18 are "product by process" claims. A "product by process" claim is directed to the product per se, no matter how actually made, see *In re Hirao*, 190 USPQ 15 at 17 (footnote 3 CCPC, 5/27/76); *In re Brown*, 173 USPQ 685 (CCPA 5/18/72); *In re Luck*, 177 USPQ 523 (CCPA, 4/26/73); *In re Fessmann*, 180 USPQ 324 (CCPA, 1/10/74); *In re Thorpe*, 227 USPQ 964 (CAFC, 11/21/85). The patentability of the final product in a "product by process" claim must be determined by the product itself and not the actual process and an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Therefore, no weight in determining the

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patentability will be given to the process portion with the manufacturing steps in the related claims.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yaeger (US 6,377,424) in view of Applicant Admitted Prior Art (AAPA).

With regard to claims 13 and 17; Yaeger shows a disc drive (Fig. 2) having an actuator (support arm) 132 (Fig. 4; column 4, line 56), but does not show that the peripheral surface of the actuator having an accuracy of 0.010 inches or less.

AAPA shows in Specification p.10, lines 6-7: "Prior art extrusion and casting process have profile tolerances of 0.010 inches to 0.020 inches."

It would have been obvious at the time the invention was made to one of ordinary skill in the art to expect that in Yaeger's disc drive the peripheral surface of the actuator having an accuracy of 0.01 inches. The rationale is as follows: Yaeger teaches that the actuator 132 can be made by casting (Column 4, lines 58-61), AAPA teaches that the prior art casting process have profile tolerances of 0.010 inches. One of ordinary skill in the art would have been motivated by AAPA's teaching to expect that in Yaeger's disc drive the peripheral surface of the actuator has an accuracy of 0.010 inches.

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4. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yaeger in view of Nikolovski (US 6,269,700).

With regard to claim 19, Yaeger shows a disc drive in Fig. 2 including: a disc 102 rotatable about a center axis; actuator means 130 supporting and actuating a transducer 104 (Fig. 3; column 6, line 33) relative to the disc and having a peripheral surface with a desired profile dimension within an inherent tolerance.

Yaeger does not show that the profile dimension with a tolerance is defined for limiting variation in resonance characteristics of the actuator means.

Nikolovski teaches that for a mechanical element as all other physical parameters are fixed, the resonance frequencies are determined by the dimension of the element (Column 5, lines 40-42).

It would have been obvious at the time the invention was made to one of ordinary skill in the art to find that the profile dimension, with a tolerance defined for limiting variation in resonance characteristics of the actuator means. The rationale is as follows: Nikolovski teaches that for a mechanical element as all other physical parameters are fixed, the resonance frequency, which is the main resonance characteristic, is determined by the dimension of the element; therefore, an element having a profile dimension D would have a corresponding resonance frequency $F_0(D)$. And as a industrial product, manufacturer has always set a tolerance $\pm d$ for the profile dimension D of the element; this leads to an upper frequency $F_+(D+d)$ and a lower frequency $F_-(D-d)$; then the variation of the resonance frequency would be:

$$\Delta F = F_+(D+d) - F_-(D-d),$$

which is defined by the profile dimension tolerance $\pm d$. One of ordinary skill in the art would have been motivated by Nikolovski's teaching to find that the profile dimension

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with a tolerance always limits the variation in resonance characteristics of the actuator means.

Claim 19 is a "product by process" claim. As stated above, no weight in determining the patentability will be given to the process related limitation "which is machined to" in this claim.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US005905608A to Frees et al shows an actuator with resonance frequencies.

US006411472B1 to Allsup show a tolerance ring for damping resonance.

US006088194A to Imaino et al shows resonant frequencies.

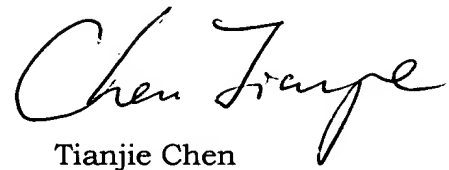
US004949194A to MacPherson et al shows a support arm with accuracy of 50 microns.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tianjie Chen whose telephone number is (703) 305-7499. The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Thi Nguyen can be reached on (703) 305-9687. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-0377.

A handwritten signature in cursive script, reading "Chen Tianjie".

Tianjie Chen
Examiner
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July 11, 2002